TRANSIENT VOLTAGE SUPPRESSOR 500 WATT SERIES
Glass Passivated Die Plus Dual Heat Strips

Features:

- **Low Profile**
- **Broad Voltage Range Available - - 6.8 to 200 Volts**
- **Broad Spectrum Transient Suppression**
- **Rapid Response - - 4 nanoseconds typical**
- **Built-in Heat Absorbing Terminations**
- **Electrically Similar to Mil-Prf-19500/516**

Applications:

- **Connector I/O Surge Suppression**
- **Data Line Protection**

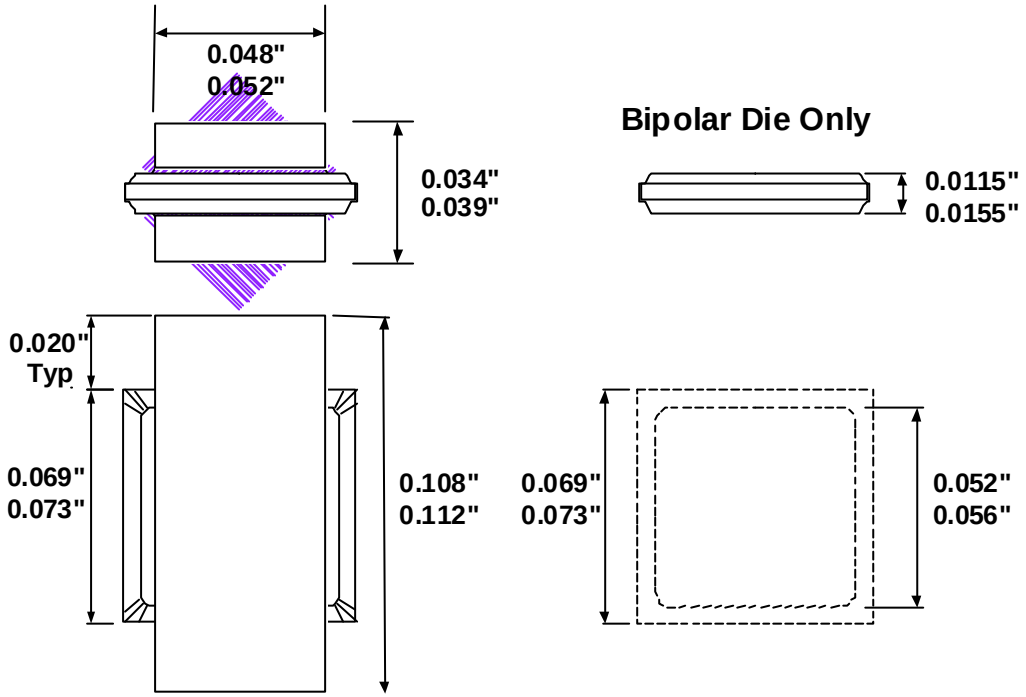
Description:

This is a bipolar transient voltage suppressor series extending from 6.8 volts to 200 volts intended for surface mount applications.

Each device comes as a “Cell” with its own heat absorbing terminals pre-bonded at high temperature. This permits mounting on printed circuit boards that cannot provide their own heat sinking. Each terminal is silver plated and is solderable permitting solder down attachment with a very small footprint. Each unit is bi-symmetrical so any orientation can be used.

ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	Test Conditions	Min	TYP	Max.	Units
Response Turn-on Time	ton			2	5	ns
Transient Energy Pulse (Cell)	Ep 1	10uS rise, I= 0.5Ip at t=100us (exponential decay)	1500			W
Transient Energy Pulse (Cell)	Ep 2	10uS rise, I= 0.5Ip at t=1.0mS (exponential decay)	500			W
Transient Energy Pulse (Cell)	Ep 3	10uS rise, I= 0.5Ip at t=10mS (exponential decay)	150			W
Transient Energy Pulse (Cell)	Ep 4	10uS rise, I= 0.5Ip at t=50mS (exponential decay)	70			W
Transient Energy Pulse (Cell)	Ep 5	10uS rise, I= 0.5Ip at t=50mS (step pulse)	50			W
Electrical Parameters				See Table		
Maximum Solder Temperature	Tmax	10 second exposure			300	ºC
Thermal Resistance (J-C)	T_{JC}	Assume heat sink on terminal strip ends		18	30	ºC/W



Note 1: "Die Only" configuration requires user to provide adequate energy absorption.

Note 2: Terminal strips are 0.009" to 0.011" thick copper with nickel and silver plate.

SEN-R-956-XXX 500Watt TVS Series

Part Number	Nominal Vz (V)	Iz (mA)	Vz min @ Iz (V)	Vz max @ Iz (V)	TC (nom) of Vz (%.°C)	Vr (V)	Ir max @ Vr (uA)	Vcc (V)	Ip (A)
SEN-R-956-001	6.8	10	6.40	7.25	0.050	5.0	1600	9.2	54.3
SEN-R-956-002	7.2	10	6.67	7.67	0.060	6.0	1600	10.3	48.5
SEN-R-956-003	7.8	10	7.22	8.30	0.060	6.5	1000	11.2	44.6
SEN-R-956-004	8.4	10	7.78	8.95	0.060	7.0	400	12.0	41.7
SEN-R-956-005	9.0	1	8.33	9.58	0.070	7.5	200	12.9	38.8
SEN-R-956-006	9.6	1	8.89	10.23	0.070	8.0	100	13.6	36.8
SEN-R-956-007	10	1	9.44	10.82	0.070	8.5	20	14.4	34.7
SEN-R-956-008	11	1	10.00	11.50	0.080	9.0	10	15.4	32.5
SEN-R-956-009	12	1	11.10	12.80	0.080	10.0	5	17.0	29.4
SEN-R-956-010	13	1	12.20	14.00	0.080	11.0	5	18.2	27.5
SEN-R-956-011	14	1	13.30	15.50	0.085	12.0	5	19.9	25.1
SEN-R-956-012	15	1	14.40	16.50	0.085	13.0	5	21.5	23.3
SEN-R-956-013	17	1	15.60	17.90	0.085	14.0	5	23.2	21.6
SEN-R-956-014	18	1	16.70	19.20	0.090	15.0	5	24.4	20.5
SEN-R-956-015	19	1	17.80	20.50	0.090	16.0	5	26.0	19.2
SEN-R-956-016	20	1	18.90	21.70	0.090	17.0	5	27.6	18.1
SEN-R-956-017	22	1	20.00	23.30	0.095	18.0	5	29.2	17.1
SEN-R-956-018	24	1	22.20	25.50	0.095	20.0	5	32.4	15.4
SEN-R-956-019	26	1	24.40	28.00	0.095	22.0	5	35.5	14.1
SEN-R-956-020	29	1	26.70	30.70	0.095	24.0	5	38.9	12.9
SEN-R-956-021	31	1	28.90	33.20	0.095	26.0	5	42.1	11.9
SEN-R-956-022	33	1	31.10	35.80	0.095	28.0	5	45.4	11.0
SEN-R-956-023	36	1	33.30	38.30	0.095	30.0	5	48.4	10.3
SEN-R-956-024	39	1	36.70	42.20	0.100	33.0	5	53.3	9.4
SEN-R-956-025	43	1	40.00	46.00	0.100	36.0	5	58.1	8.6
SEN-R-956-026	48	1	44.40	51.10	0.100	40.0	5	64.5	7.8
SEN-R-956-027	51	1	47.80	54.90	0.100	43.0	5	69.4	7.2
SEN-R-956-028	54	1	50.00	57.50	0.100	45.0	5	72.7	6.9
SEN-R-956-029	57	1	53.30	61.30	0.100	48.0	5	77.4	6.5
SEN-R-956-030	61	1	56.7	65.2	0.100	51.0	5	82.4	6.1
SEN-R-956-031	65	1	60.0	69.0	0.100	54.0	5	87.1	5.7
SEN-R-956-032	69	1	64.4	74.1	0.105	58.0	5	93.6	5.3
SEN-R-956-033	72	1	66.7	76.7	0.105	60.0	5	96.8	5.2
SEN-R-956-034	76	1	71.1	81.8	0.105	64.0	5	103.0	4.9
SEN-R-956-035	84	1	77.8	89.5	0.110	70.0	5	113.0	4.4
SEN-R-956-036	90	1	83.3	95.8	0.110	75.0	5	121.0	4.1
SEN-R-956-037	93	1	86.7	99.7	0.110	78.0	5	126.0	4.0
SEN-R-956-038	101	1	94.4	108.2	0.110	85.0	5	137.0	3.6
SEN-R-956-039	108	1	100.0	115.5	0.110	90.0	5	146.0	3.4
SEN-R-956-040	120	1	111.0	128.0	0.110	100.0	5	162.0	3.1
SEN-R-956-041	131	1	122.0	140.5	0.110	110.0	5	177.0	2.8
SEN-R-956-042	143	1	133.0	153.0	0.110	120.0	5	193.0	2.6
SEN-R-956-043	155	1	144.0	165.5	0.110	130.0	5	209.0	2.4
SEN-R-956-044	180	1	167.0	192.5	0.110	150.0	5	243.0	2.1
SEN-R-956-045	192	1	178.0	205.0	0.110	160.0	5	259.0	1.9
SEN-R-956-046	203	1	189.0	217.5	0.110	170.0	5	275.0	1.8

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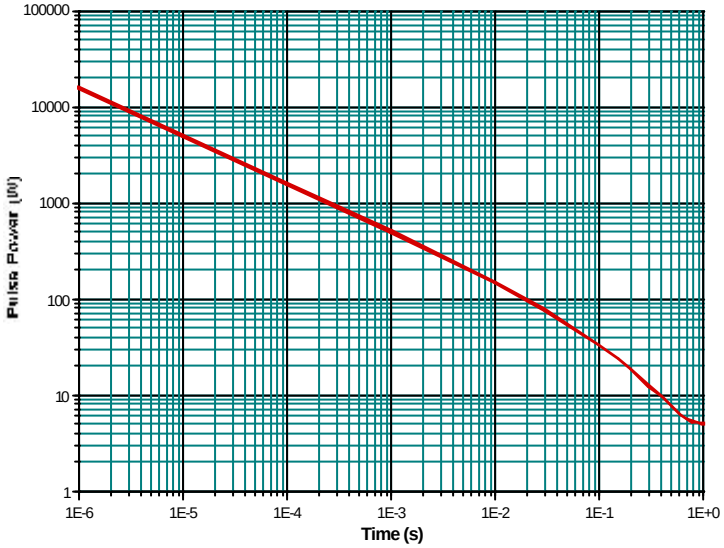
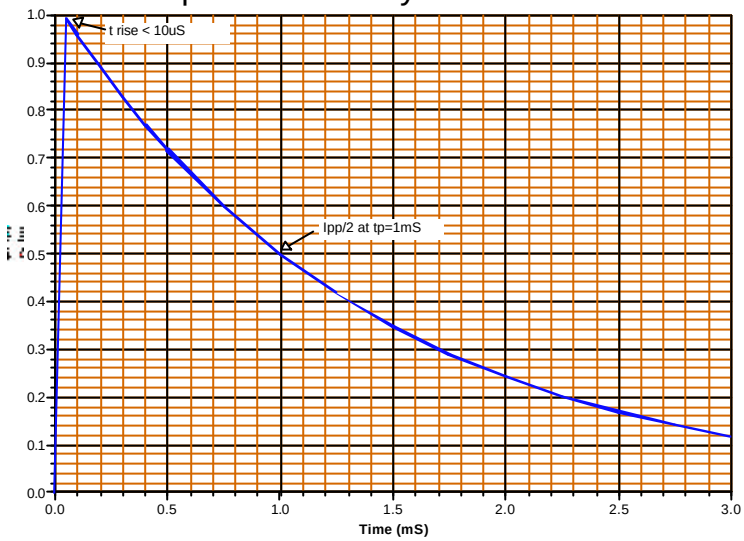
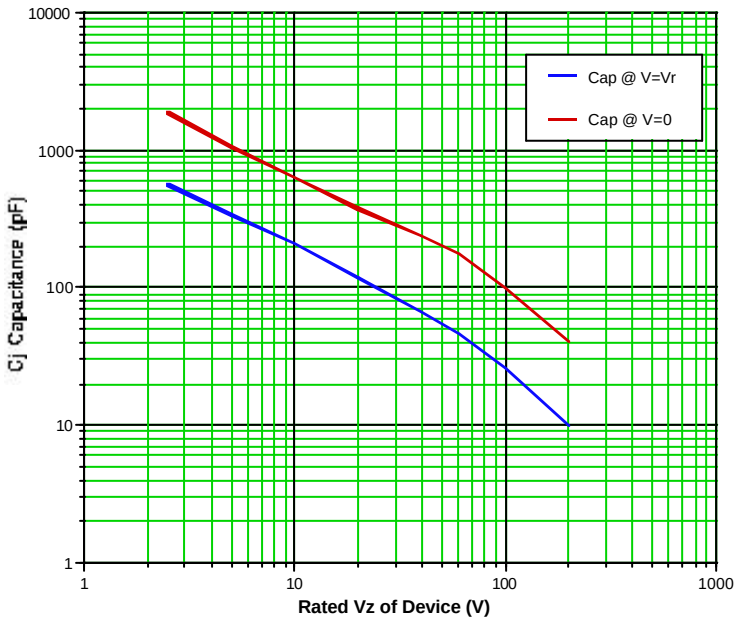
Clamp Power vs Time for Sensitron 500W TVS Series



Exponential Decay Pulse Waveform



Reverse Junction Capacitance for Sensitron 500W TVS



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